

Color Video Camera

Operating Instructions

EVI-G20
EVI-G21 (For European model only)

Printed in Japan

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Owner's Record

The model number and the serial number are located on the bottom exterior.

Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon the dealer regarding this product.

Model No. _____

Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

For the customers in Netherlands

Voor de klanten in Nederland

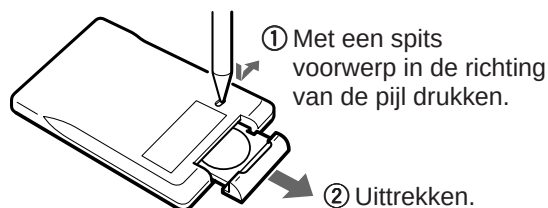
Bij dit produkt zijn batterijen geleverd.

Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.



Vervangen van de lithiumbatterij

Als de afstandsbediening niet goed werkt, kan de lithiumbatterij leeg zijn. Vervang dan de lithiumbatterij door een nieuwe (CR2025).



Features

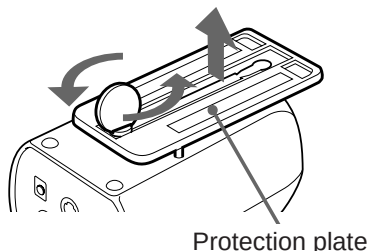
- Video camera that allows quick and smooth pan/tilt actions.
- Space-saving design that can be placed on top of a display monitor or desk.
- Multi-interface that enables operation with a remote commander and personal computer.

Getting started

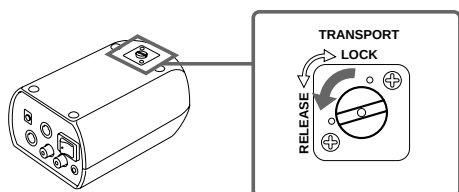
Unlocking the transport lock

Be sure to unlock the transport lock before you use the camera.

- 1 Detach the protection plate by turning the screw with a coin, etc.



- 2 Turn the TRANSPORT to RELEASE until it clicks with a coin, etc.

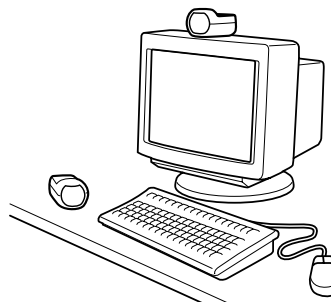


Notes

- Be sure to detach the protection plate or use the plate to fix the camera. (See “To fix the camera firmly” below.)
- When you use the camera, be sure to set the transport lock to RELEASE until it clicks with a coin, etc. When you carry the camera, be sure to turn the TRANSPORT to LOCK with a coin, etc. The horizontal movement of the camera is locked.

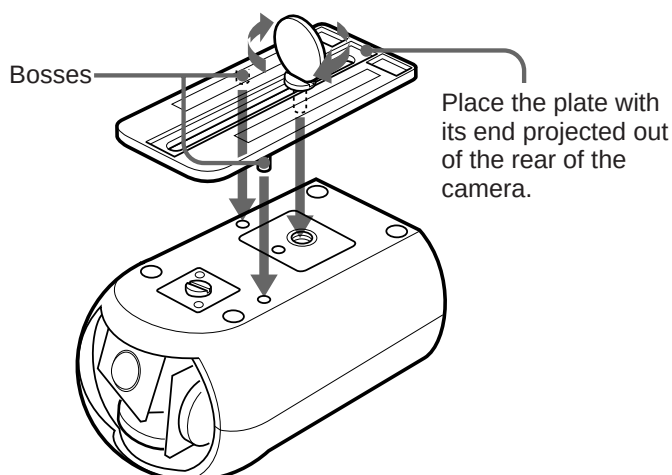
Setting up the camera

Place the camera on a leveled surface.

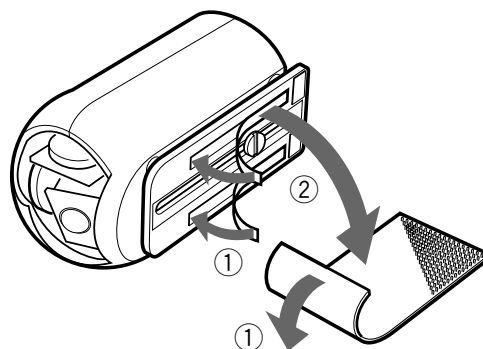


To fix the camera firmly

- 1 Align the bosses on the protection plate with the holes on the bottom of the camera, then turn the screw clockwise with a coin etc.



- 2 Stick the supplied velcro tapes on the protection plate and the surface on which the camera is to be placed, then fix the camera.

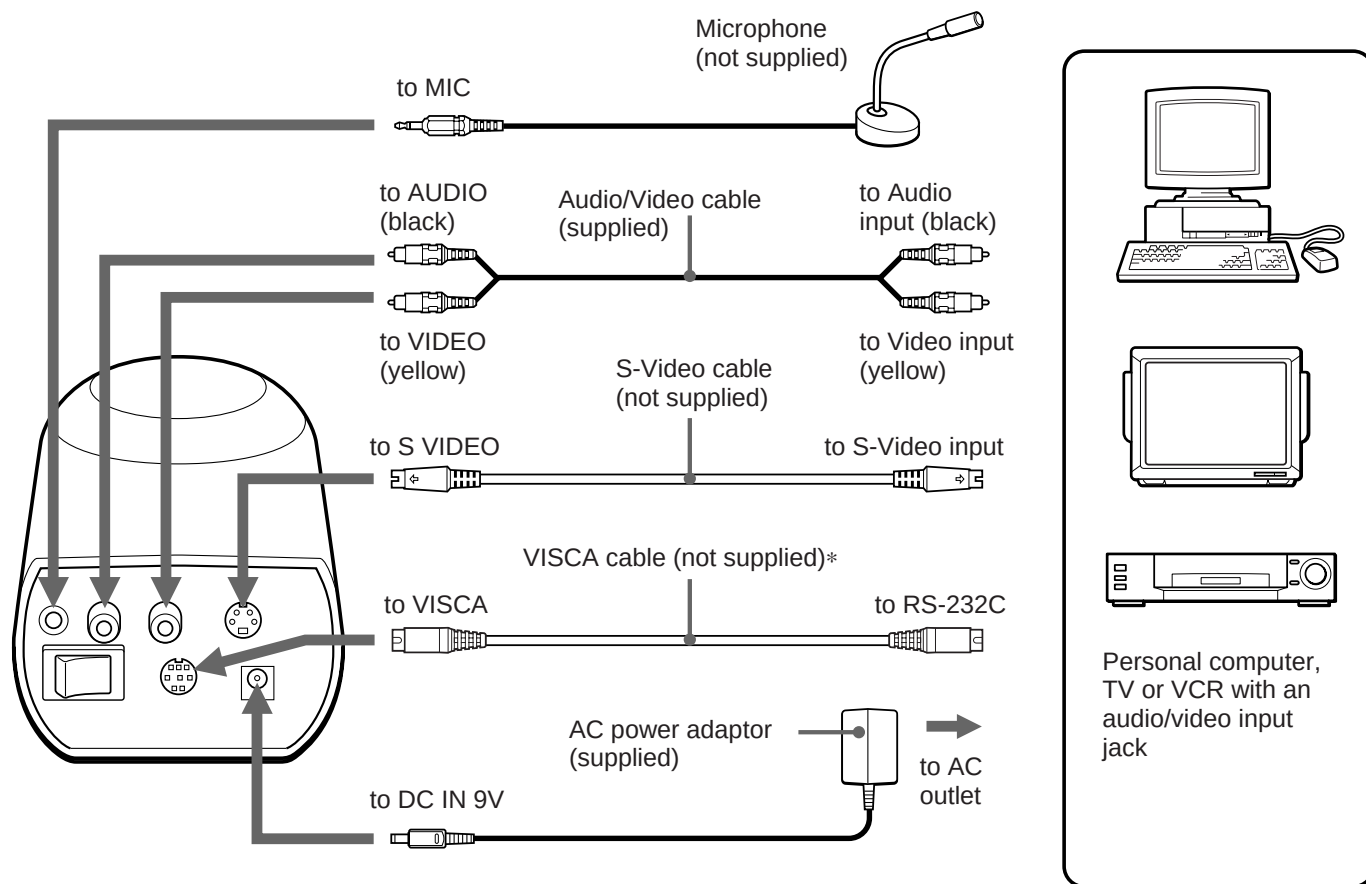


Note

Keep the camera away from strong light sources such as direct sunlight or artificial lights. Otherwise, the remote control may not function properly.

Connections

Connect your Color Video Camera to a personal computer, TV or VCR equipped with an audio/video input. Some connections may require extra cables. Refer to the instruction manual of the equipment to be connected.



* When the video camera is connected to a personal computer with a VISCA cable, you can operate the video camera with the personal computer.

If your equipment has an S-Video input

It is recommended to use an S-Video cable (not supplied) for the connection of the video signal for higher picture quality.

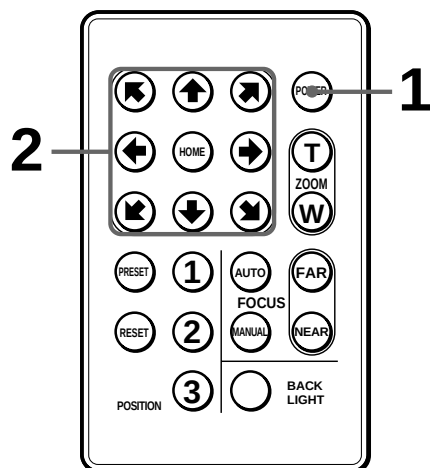
Notes

- You cannot connect this product to a personal computer that is not equipped with a video or S-Video input. Some computers may require a video capture board and/or sound board and software in order to use this product. For details, consult your computer dealer.
- Use only the supplied AC power adaptor. Do not use any other AC power adaptor.

Polarity of the plug

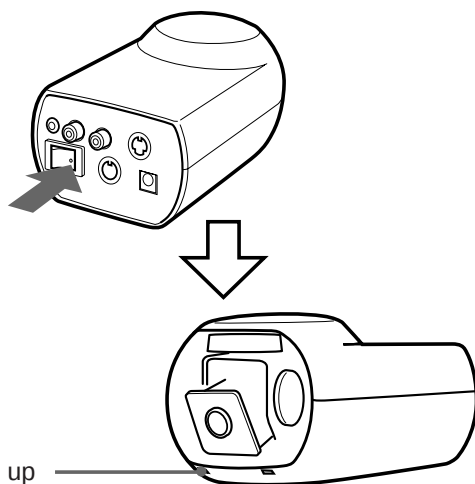


Using the camera



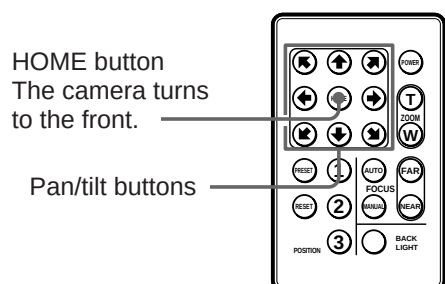
1 Turning on the camera

Press the POWER switch at the rear of the camera to turn on the camera. The main power turns on and you can control the camera with the remote commander. When the main power is on, press the POWER switch on the remote commander to turn on the camera or set the camera to standby status.



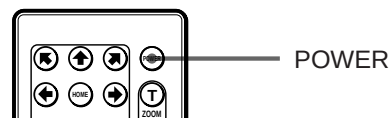
2 Adjusting the direction of the camera

Press the pan/tilt buttons to adjust the direction of the camera. Press the pan/tilt button of the desired direction as you check the picture on the screen.



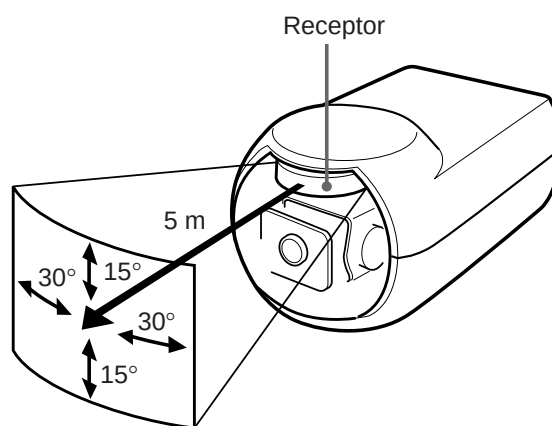
After using the camera

Press the POWER switch on the remote commander. The camera is then in standby status.



The effective area of the remote commander

Use the remote commander within the area illustrated below and aim at the receptor of the camera with the remote commander to remote control the camera.

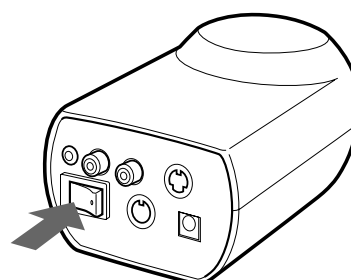


Do not apply mechanical shock to the camera when the camera is on

The camera may not move even if you press the pan/tilt buttons. In this case, press the POWER switch on the remote commander or the POWER switch at the rear of the camera to turn off the camera and press the switch again to turn it on.

When the camera is not in use for an extended period of time

Press the POWER switch at the rear of the camera to turn off the camera. The main power turns off. In this setting, the remote control cannot operate the camera.

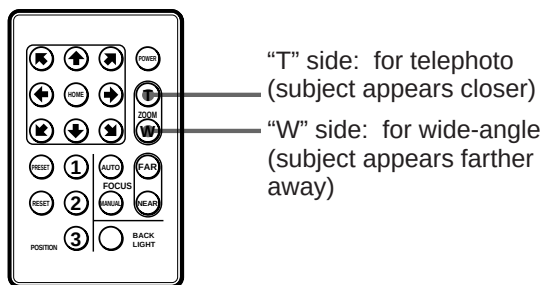


Note

When you press the POWER switch at the rear of the camera to turn off the camera, the preset memory is erased.

Using the zoom feature

Press either of the two ZOOM buttons.

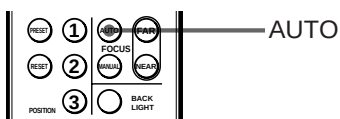


Focusing on a subject

Automatic focusing

Press the AUTO button.

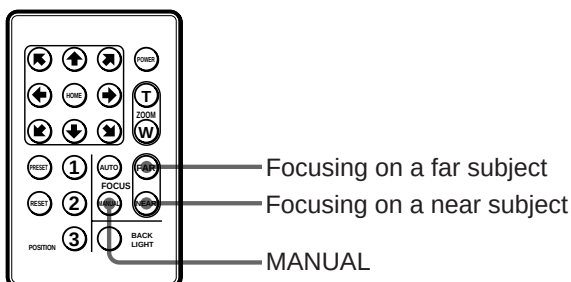
The camera focuses on the subject at the center of the screen automatically.



- When the automatic focusing does not function accurately, try the manual focusing.

Manual focusing

After pressing the MANUAL button, press either of the FAR or NEAR buttons.



Shooting with Backlighting

When you shoot a subject with the light source behind the subject, the subject becomes dark. In such cases, press BACK LIGHT.

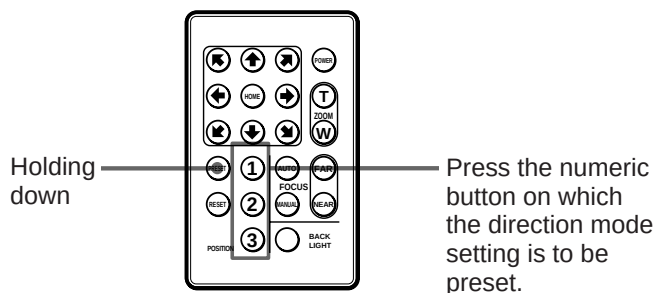


- To cancel the function, press the BACK LIGHT button again.

Presetting the direction of the camera

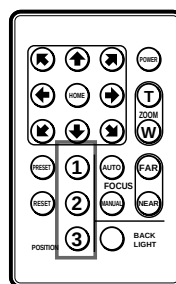
Up to three direction mode settings (combination of the direction, zooming, focusing and backlighting) can be preset.

- Adjust the direction, zooming, focusing, and backlighting of the camera.
- While holding down the PRESET button, press one of the numeric buttons 1 – 3.



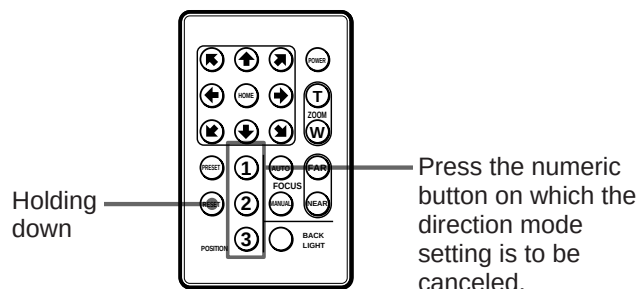
To recall the preset memory

Press one of the numeric buttons 1 – 3.



To cancel the preset memory

While holding down the RESET button, press one of the numeric buttons 1 – 3. The camera turns to the front and changes to the automatic focusing. The backlight function is also canceled.



Note

When you press the POWER switch at the rear of the camera to turn off the camera, the preset memory is erased.

Precautions

- If the light exceeds the illumination range, the image may not be displayed clearly.
- Do not focus on a stationary object or bright object for too long, as the color filter may be damaged.

Precaution on copyright

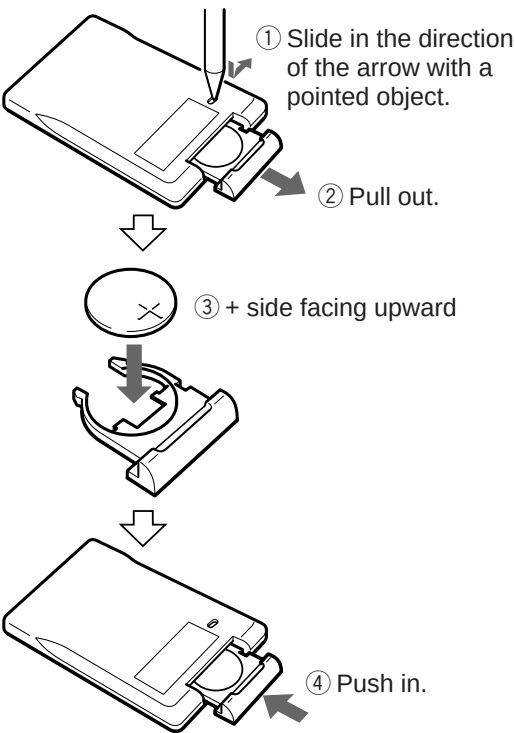
Television programs, pictures, magazines, and other materials may be copyrighted. Unauthorized recording or storing of such materials violates the provision of the copyright laws.

Maintenance

- Clean the Color Video Camera body with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution.
- Do not use any type of solvent which may damage the finish.

To replace the lithium battery

If the remote commander does not operate properly, the lithium battery may be worn out. Replace the lithium battery with a new one (CR2025).



NOTES ON LITHIUM BATTERY

- Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to ensure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.

WARNING

Battery may explode if mistreated. Do not recharge, dismantle or dispose of in fire. Replace the battery with a CR2025 lithium battery. Use of other batteries may present a risk of fire or explosion.

Troubleshooting

Symptom	Remedy
The picture does not appear on the TV or computer screen.	• Make sure the connections are made correctly. • Connect to other equipment for example a TV, to check if the camera is damaged.
The picture and sound quality on the computer screen is not as good as that on a TV.	• Depending on the computer brand, you may not be able to obtain the same quality of picture as a TV. • For more details, consult your computer retailer.
When mechanical shock is applied to the camera, the camera does not move even if you press the pan/tilt buttons.	Press the POWER switch of the remote commander or the POWER switch at the rear of the camera to turn off the camera and press the POWER switch again to turn on the camera.

Specifications

System

Video signal	EVI-G20: NTSC Color, EIAJ standards EVI-G21: PAL Color, CCIR standards
Picture element	1/4 inch color CCD Total picture element number: EVI-G20: Approx. 410,000 EVI-G21: Approx. 470,000 Effective picture element number: EVI-G20: Approx. 380,000 EVI-G21: Approx. 440,000
Lens	Erectomotion triple zoom lens f=4.5 to 13.5 mm, F2.3 to F4.1 horizontal angle 15° to 45°
Point-blank range	Zoom range 0.5 m (wide macro: 40 mm)
Minimum illumination	16 lux (F2.3)
Illumination range	16 to 6,000 lux 16 to 70,000 lux (VISCA control)
Shutter speed	EVI-G20: 1/60 to 1/670 1/60 to 1/10,000 (VISCA control) EVI-G21: 1/50 to 1/670 1/50 to 1/10,000 (VISCA control)
Gain selector	Automatic/manual
Horizontal resolution	more than 400 TV
Video S/N	more than 45 dB
Pan/tilt action	Horizontal $\pm 30^\circ$, Vertical $\pm 15^\circ$

Input/output terminals

Video output	RCA pin jack (1), 1 Vpp, 75 ohm unbalance, synchronizatiion negative
S video output	4 pin mini DIN (1)
Audio output	RCA pin jack (1), Rated output 327 mV (monaural), output impedance less than 2.2 kilohm
Control terminal	RS232C, 8 pin mini DIN, 9600 bps, data 8 bit, stop 1 bit
Power terminal	DC IN 9 V (EIAJ unified polarity type)
Microphone input	Mini jack (monaural) (1), Rated input 0.775 mV (for low impedance microphone), DC 3 V, input impedance more than 10 kilohm ($\phi 3.5$)

General

Power requirements	DC 9 V
Power consumption	2.3 W
Operating temperature	0° to 40°C (32° to 104° F)
Storage temperature	-20° to 60°C (-4° to 140° F)
Dimensions	Video camera: Approx. 84 × 69 × 142 mm (3 ³ / ₈ × 2 ³ / ₄ × 5 ⁵ / ₈ in.) (w/h/d) Remote control: Approx. 55 × 85 × 6 mm (2 ¹ / ₄ × 3 ³ / ₈ × ¹ / ₄ in.) (w/h/d)
Mass	Video camera: Approx. 450 g (15.9 oz) Remote commander: Approx. 23 g (0.8 oz) incl. battery

Supplied accessories

AC power adaptor (1)
Audio/video cable (1)
Remote commander (1)
Velcro tapes (large 1, small 2)
Protection plate (1)

Design and specifications are subject to change without notice.